| Grade 5 -- Mathematics | | | | | |
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| **Subject** | **Grade Level** | **Item Number** | **DOK Level** | **CCA V. 4.0** | **Annotation** |
| Mathematics | 5 | 1 | 2 | MA-05-1.3.1 | This item is an application of computational algorithms. It is a multi-step problem requiring the student to make a decision of how to approach the computations. |
| Mathematics | 5 | 2 | 1 | MA-05-3.1.1 | The student merely has to recall the definition of an edge and then count the edges that are illustrated in the figure. |
| Mathematics | 5 | 3 | 2 | MA-05-4.1.1 | The student is interpreting information from a simple graph. |
| Mathematics | 5 | 4 | 2 | MA-05-5.1.1 | The student is recognizing and identifying a pattern that contains two different operations. |
| Mathematics | 5 | 5 | 2 | MA-05-1.1.2 | This item requires students to compare different interpretations of a simple diagram. While the process may be somewhat complex for fifth graders, it is not abstract enough to reach a level 3. The response requires explanation, but not justification. |
| Mathematics | 5 | 6 | 3 | MA-05-3.1.4 | Students are asked to create both an example and a non-example of "congruent." They must apply the concept of congruent and provide reasons for why the figures are congruent and non-congruent. |
| Mathematics | 5 | 7 | 3 | MA-05-4.4.1 | Students must choose a strategy to solve the problem. The response requires the student to use planning and evidence from the table supported with a mathematical explanation to justify their answer. |
| Mathematics | 5 | 8 | 2 | MA-05-5.1.2 | Although the student is performing basic algorithms to complete the table, some planning is involved in designing the graph on which to plot the points. |

| Grade 8 -- Mathematics | | | | | |
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| Subject | **Grade Level** | **Item Number** | DOK Level | **CCA V. 4.0** | **Annotation** |
| Mathematics | 8 | 1 | 2 | MA-08-4.2.1 | The item is a multi-step problem requiring mental processing. The student must use the concept of a mean and apply the formula to arrive at a solution. |
| Mathematics | 8 | 2 | 2 | MA-07-5.1.1 | The student must recognize and apply a real-world pattern using multiple steps. |
| Mathematics | 8 | 3 | 2 | MA-08-5.3.1 | The student has to substitute for a variable and apply the order of operations to solve the multi-step equation. |
| Mathematics | 8 | 4 | 1 | *MA-08-3.2.2a* | The student must recognize or identify a rotation. |
| Mathematics | 8 | 5 | 3 | MA-08-5.1.2<br>MA-08-1.1.2 | The problem involves an abstract idea requiring multiple steps supported with a mathematical explanation to justify the answer. |
| Mathematics | 8 | 6 | 2 | MA-08-2.1.1 | Students have to determine the appropriate formulas and apply them to solve the problem. |
| Mathematics | 8 | 7 | 3 | MA-08-4.4.2 | This level 3 problem requires application of the abstract concepts of theoretical and experimental probability. Students must compare theoretical/experimental probability and make a conjecture. |

| Grade 11 -- Mathematics | | | | | |
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| Subject | **Grade Level** | **Item Number** | DOK Level | **CCA V. 4.0** | **Annotation** |
| Mathematics | 11 | 1 | 1 | MA-11-4.2.1 | Students only need to know the definition of negative correlation (the relationship between two variables). |
| Mathematics | 11 | 2 | 1 | *MA-11-1.1.1a* | Students are locating points on a number line, and then comparing the points' location in relation to 0. |
| Mathematics | 11 | 3 | 2 | MA-11-3.2.1 | This is a multi-step problem involving applying the algorithm for dilation and then identifying the resulting image. |
| Mathematics | 11 | 4 | 1 | *MA-11-5.1.2b* | The student must only recognize which set of data fits the definition of an inverse variation. |
| Mathematics | 11 | 5 | 2 | MA-11-5.1.1 | There is only one possible answer for each response. Students must make some decisions in planning their approach to the rule. They interpret data from the table they create. |
| Mathematics | 11 | 6 | 2 | MA-11-3.1.6 | Explaining why the two triangles are similar is accomplished primarily by citing the AA Similarity theorem and demonstrating how it applies. The student must correctly set up the proportion in order to determine the value for y. |
| Mathematics | 11 | 7 | 3 | MA-11-5.3.3 | This problem requires reasoning, planning, using evidence, and higher level thinking. This multi-step problem includes substituting for a variable, creating a graph, formulating an equation and then interpreting the results from that graph. |
| Mathematics | 11 | 8 | 2 | MA-11-4.4.1 | The student is not asked to justify any of their results. They must plan the sample space chart, and then interpret the data displayed in that chart. Part d is mostly algorithmic if the student knows how to compute the probability. |